

# Datasheet: MCA699 BATCH NUMBER 148954

Description:	RAT ANTI HUMAN CD49f	
Specificity:	CD49f	
Other names:	INTEGRIN ALPHA 6 CHAIN, VLA-6	
Format:	Purified	
Product Type:	Monoclonal Antibody	
Clone:	NKI-GoH3	
Isotype:	lgG2a	
Quantity:	0.2 mg	

## **Product Details**

#### **Applications**

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	-			1/50 - 1/200
Immunohistology - Frozen	•			
Immunohistology - Paraffin			•	
ELISA			•	
Immunoprecipitation	-			
Western Blotting			•	
Immunofluorescence	•			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Human
Species Cross Reactivity	Reacts with: Mouse, Dog, Pig, Cynomolgus monkey, Sheep <b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture

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Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	BALB/c mouse mammary tumor cells
External Database Links	UniProt: P23229 Related reagents  Entrez Gene: 3655 ITGA6 Related reagents
RRID	AB_321462
Fusion Partners	Spleen cells from immunized Sprague-Dawley rats were fused with cells of the SP2/0 mouse myeloma cell line
Specificity	Rat anti Human CD49f antibody, clone NKI-GoH3 recognizes CD49f, also known as the VLA-6 alpha chain. CD49f is a 1107 amino acid ~120 kDa cell surface glycoprotein that forms distinct complexes with CD29 (VLA beta-chain), resulting in the VLA-6 (alpha-6 beta-1) complex, expressed on human platelets, or with the beta-4 integrin resulting in the alpha-6 beta-4 complex expressed on various human epithelial cells.
	Rat anti Human CD49f antibody, clone NKI-GoH3 reacts with platelets, megakaryocytes, T lymphocytes and common acute lymphoblastic leukemia cells (alpha-6 beta-1). In immunohistology the monoclonal antibody reacts with epithelial cells of a variety of tissues, peripheral nerves, microvascular endothelial cells, placenta cyto- and syncytotrophoblasts.VLA-6 is an important mediator of cell binding to laminin.
	Rat anti Human CD49f antibody, clone NKI-GoH3 blocks the binding of cells to the E8 fragment of laminin (Sonnenberg et al. 1998).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> platelets in 100ul.
	Ose Tour of the suggested working dilution to laber to platelets in Toodi.
Histology Positive Control Tissue	Human Tonsil

- anti-VLA antibodies in the platelet panel, in Leucocyte Typing IV: White Cell Differentiation Antigens. Edited by Knapp, W. *et al.* Oxford University Press p1029-1032.
- 3. Sonnenberg, A. *et al.* (1986) Development of mouse mammary gland: identification of stages in differentiation of luminal and myoepithelial cells using monoclonal antibodies and polyvalent antiserum against keratin. J Histochem Cytochem. 34 (8): 1037-46.
- 4. Sonnenberg, A. *et al.* (1987) A complex of platelet glycoproteins Ic and IIa identified by a rat monoclonal antibody. <u>J Biol Chem. 262 (21): 10376-83.</u>
- 5. Hemler, M.E. *et al.* (1988) Multiple very late antigen (VLA) heterodimers on platelets. Evidence for distinct VLA-2, VLA-5 (fibronectin receptor), and VLA-6 structures. <u>J Biol Chem. 263 (16): 7660-5.</u>
- 6. Galkowska, H. *et al.* (1996) Reactivity of antibodies directed against human antigens with surface markers on canine leukocytes. Vet Immunol Immunopathol. 53 (3-4): 329-34.
- 7. Sonnenberg, A. *et al.* (1988) Laminin receptor on platelets is the integrin VLA-6. <u>Nature.</u> 336 (6198): 487-9.
- 8. Sonnenberg, A. *et al.* (1990) Integrin recognition of different cell-binding fragments of laminin (P1, E3, E8) and evidence that alpha 6 beta 1 but not alpha 6 beta 4 functions as a major receptor for fragment E8. <u>J Cell Biol. 110 (6): 2145-55.</u>
- 9. Yoshino, N. *et al.* (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of cynomolgus monkeys (*Macaca fascicularis*) by using anti-human cross-reactive antibodies. Exp Anim. 49 (2): 97-110.
- 10. Sonnenberg, A. *et al.* (1990) The alpha 6 beta 1 (VLA-6) and alpha 6 beta 4 protein complexes: tissue distribution and biochemical properties. J Cell Sci. 96 ( Pt 2): 207-17.
- 11. Sonnenberg, A. *et al.* (1988) Identification and characterization of a novel antigen complex on mouse mammary tumor cells using a monoclonal antibody against platelet glycoprotein Ic. J Biol Chem. 263 (28): 14030-8.
- 12. Le Bellego, F. *et al.* (2005) Cytoskeleton reorganization mediates alpha6beta1 integrin-associated actions of laminin on proliferation and survival, but not on steroidogenesis of ovine granulosa cells. <u>Reprod Biol Endocrinol. 3: 19.</u>
- 13. Anderson, C. *et al.* (2009) Sonic hedgehog-dependent synthesis of laminin alpha1 controls basement membrane assembly in the myotome. Development. 136: 3495-504.
- 14. Collins, C.A. *et al.* (2011) Reprogramming adult dermis to a neonatal state through epidermal activation of β-catenin Development.138: 5189-99.
- 15. Moreira, M. L. *et al.* (2016) Vaccination against canine leishmaniosis increases the phagocytic activity, nitric oxide production and expression of cell activation/migration molecules in neutrophils and monocytes. <u>Veterinary Parasitology. 15 Feb [Epub ahead of print]</u>
- 16. Mastrogiannaki M *et al.* (2016) β-catenin stabilization in skin fibroblasts causes fibrotic lesions by preventing adipocyte differentiation of the reticular dermis. <u>J Invest Dermatol.</u> pii: S0022-202X(16)00489-9. [Epub ahead of print]
- 17. Schäfer, G. *et al.* (2013) The role of inflammation in HPV infection of the Oesophagus. BMC Cancer. 13: 185.
- 18. Peuhu. E, *et al.* (2017) Integrin beta 1 inhibition alleviates the chronic hyperproliferative dermatitis phenotype of SHARPIN-deficient mice <u>PLOS ONE. 12 (10):</u> <u>e0186628.</u>
- 19. Rayagiri, S.S. *et al.* (2018) Basal lamina remodeling at the skeletal muscle stem cell niche mediates stem cell self-renewal. <u>Nat Commun. 9 (1): 1075.</u>
- 20. Loureiro, J. et al. (2019) Conjugation of the T1 sequence from CCN1 to fibrin

hydrogels for therapeutic vascularization. <u>Mater Sci Eng C Mater Biol Appl. 104: 109847.</u> 21. Ikeda, A. *et al.* (2020) Follistatin expressed in mechanically-damaged salivary glands of male mice induces proliferation of CD49f<sup>+</sup> cells. <u>Sci Rep. 10 (1): 19959.</u>

**Further Reading** 

1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update.

Vet Res. 39: 54.

Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we

recommend microcentrifugation before use.

Guarantee 12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #10040 available at:

https://www.bio-rad-antibodies.com/SDS/MCA699

10040

**Regulatory** For research purposes only

## Related Products

## **Recommended Secondary Antibodies**

Rabbit Anti Rat IgG (STAR16...) <u>DyLight®800</u>

Rabbit Anti Rat IgG (STAR17...)

Goat Anti Rat IgG (STAR72...)

Goat Anti Rat IgG (STAR69...)

Goat Anti Rat IgG (STAR73...)

RPE

Rabbit Anti Rat IgG (STAR21...)

HRP

Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...) <u>DyLight®550</u>, <u>DyLight®650</u>, <u>DyLight®800</u>

Goat Anti Rat IgG (STAR131...) Alk. Phos., Biotin

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